Competitive Comparison

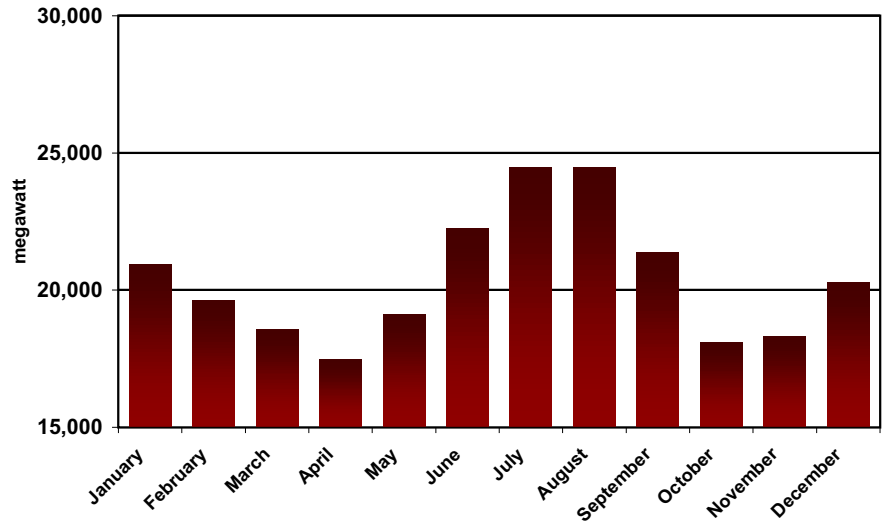
TVA is competitive today and will continue to be competitive tomorrow. TVA's mission, as a public power provider, is to provide a reliable source of power at the lowest feasible rates for the people of the Tennessee Valley.

TVA has been able to remain competitive and invest in new generation and transmission to meet the future needs of the Valley, while reducing fixed costs, investing in new environmental controls and managing the fifth largest river system in the nation – with only one rate increase in the past fourteen years.

TVA is Competitive Today

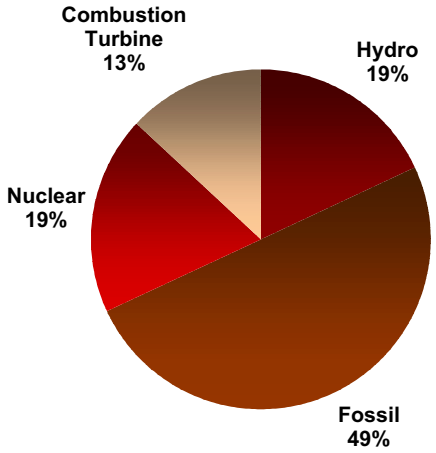
What makes TVA competitive? TVA is one of the largest generators of power in the region and the nation. TVA's dual-peaking power demand . . .

TVA's Dual Peaking System
Five Year Average Monthly Peak System Demand



. . . uses a diverse fuel mix—coal, nuclear, hydro, natural gas, and fuel oil---to generate power.

TVA Fuel Mix
As a Percentage of Total System Net Winter Dependable Capacity



The TVA power system has set many production records, and is operating more efficiently and cost-effectively than at any time in the last three decades.

Cost Comparison

TVA has been competitive in the past and remains competitive today in part because of its low production and transmission operating costs. These costs include fuel and operating and maintenance (O&M) costs for power production and transmission.

TVA's costs compare favorably to the costs of other large utilities in the eastern interconnecting grid. TVA's production and transmission costs are 29% less than the average of the twelve investor-owned utilities in the eastern interconnecting grid that generate 50 million megawatt-hours or more annually.

2000 Production & Transmission Operating Cost Comparison - Large Regional Investor-Owned Utilities

cents per kWh

Large Regional Investor-Owned Utilities[1]	Transmission Costs	Operating & Maintenance Costs	Fuel Costs	Total Production & Transmission Costs
Entergy	0.10	0.68	2.67	**3.45**
FPL Group	0.06	0.49	2.74	**3.29**
American Electric Power	0.12	0.70	1.75	**2.57**
FirstEnergy	0.17	1.46	0.90	**2.53**
Progress Energy	0.08	0.62	1.68	**2.38**
DTE Energy	0.05	0.64	1.33	**2.02**
Southern Company	0.07	0.54	1.41	**2.02**
Exelon	0.07	1.11	0.59	**1.77**
Dominion	0.06	0.55	1.16	**1.77**
Cinergy	0.10	0.39	1.25	**1.74**
Ameren	0.09	0.63	0.98	**1.70**
Duke	0.06	0.66	0.92	**1.64**
Investor-Owned Utilities National Average[2]	0.16	0.70	1.48	**2.34**
Large Regional IOUs Average	0.09	0.71	1.48	**2.28**
Large Public Power Systems Average[3]	0.24	0.59	1.02	**1.85**
TVA	**0.07**	**0.55**	**0.99**	**1.61**

1) Large utilities in the eastern interconnecting grid with net generation of 50 million MWh or greater - Holding company costs calculated from a grouping of operating companies.
2) Average of all investor-owned utilities
3) Public power systems with 120,000 MWh in total sales for two consecutive years or more - Excludes TVA - average including TVA is 1.79

Source: RDI PowerDat - January 2002

As the utility industry moves toward a restructured marketplace and power is increasingly sold between different regions, it becomes more relevant to compare costs on a national level. TVA's total production and transmission operating costs compare even more favorably with the largest investor-owned utilities in the nation. TVA's fuel and production and transmission O&M costs are over 30% less than both the national average of all investor-owned utilities and the average of the twenty largest investor-owned power generators in the nation.

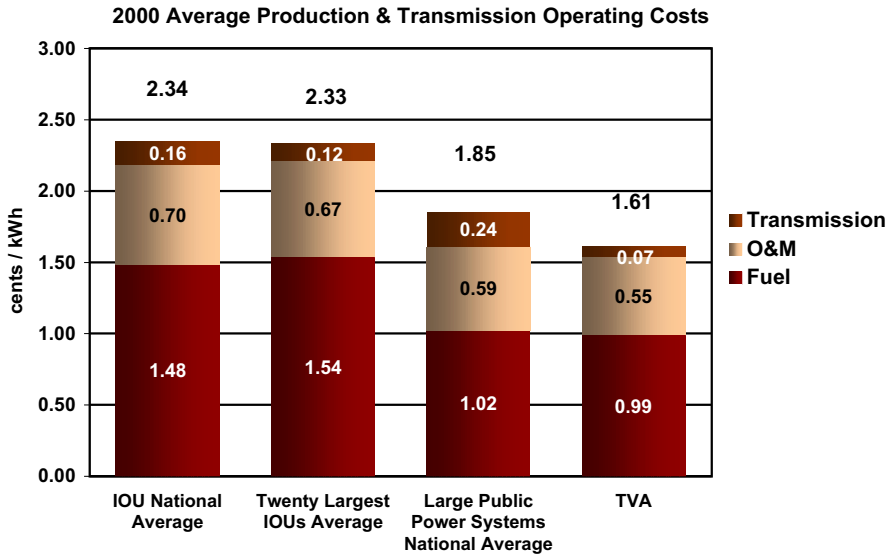
2000 Production & Transmission Operating Cost Comparison - Twenty Largest Investor-Owned Utilities
cents per kWh

Twenty Largest Investor-Owned Utilities[1]	Transmission Costs	Operating & Maintenance Costs	Fuel Costs	Total Production & Transmission Costs
Reliant Energy, Inc.	0.32	0.55	2.69	**3.56**
Entergy Corp.	0.10	0.68	2.67	**3.45**
FPL Group	0.06	0.49	2.74	**3.29**
TXU Corporation	0.29	0.48	2.40	**3.17**
Holdco (Pepco/Conectiv)	0.12	0.88	1.75	**2.75**
American Electric Power Company Inc	0.12	0.70	1.75	**2.57**
FirstEnergy	0.17	1.46	0.90	**2.53**
Progress Energy	0.08	0.62	1.68	**2.38**
Xcel Energy, Inc.	0.21	0.50	1.45	**2.16**
Constellation Energy Group, Inc.	0.08	0.85	1.11	**2.04**
DTE Energy	0.05	0.64	1.33	**2.02**
Southern Company	0.07	0.54	1.41	**2.02**
Exelon	0.07	1.11	0.59	**1.77**
Dominion	0.06	0.55	1.16	**1.77**
Cinergy	0.10	0.39	1.25	**1.74**
Edison International	0.15	0.67	0.91	**1.73**
Ameren	0.09	0.63	0.98	**1.70**
Duke	0.06	0.66	0.92	**1.64**
PowerGen plc	0.05	0.41	1.13	**1.59**
Scottish Power PLC	0.19	0.40	0.91	**1.50**
Investor-Owned Utilities National Average[2]	0.16	0.70	1.48	**2.34**
Twenty Largest IOUs Average	0.12	0.67	1.54	**2.33**
Large Public Power Systems Average[3]	0.24	0.59	1.02	**1.85**
TVA	**0.07**	**0.55**	**0.99**	**1.61**

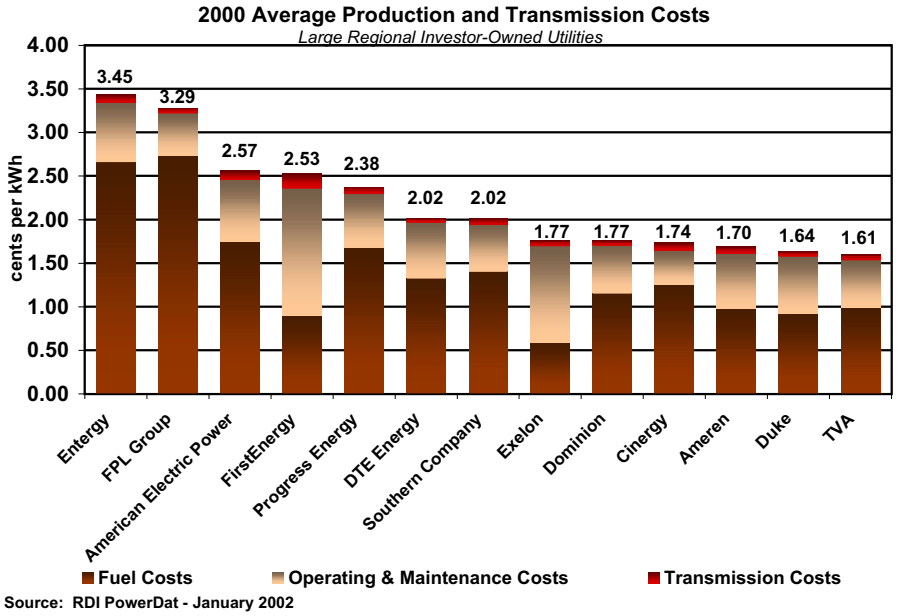
1) Twenty largest investor-owned utilities, in terms of net generation - Holding company costs calculated from a grouping of operating companies
2) Average of all investor-owned utilities
3) Public power systems with 120,000 MWh in total sales for two consecutive years or more - Excludes TVA - average including TVA is 1.79

Source: RDI PowerDat - January 2002

Competitive Position



Source: RDI PowerDat - January 2002



Source: RDI PowerDat - January 2002

Price Competitiveness

TVA's competitiveness can be evaluated from several perspectives – from that of the financial community, end-use electricity customers, or distributors of TVA power.

The financial community places great importance on whether TVA will continue to generate cash flows sufficient to service its debt with reasonable coverage ratios. TVA's ability to service debt is inextricably linked to the level of its electric service rates. If rates are sufficient, cash flow should be sufficient to cover debt service. Therefore, an important measure of competitiveness for the financial community is TVA's electric service rates. End-users of electricity consider retail rates as the most directly observable and important measure of competitiveness

Retail Price Comparison

TVA's low production costs equate to low prices for residential, commercial and industrial electricity consumers in the Tennessee Valley region. The average residential power price in the area served by TVA is 6.4 cents per kilowatt-hour, 22% below the national average. The average residential price in areas served by the twelve investor-owned utilities in the eastern interconnecting grid that generate 50 million megawatt-hours or more annually is almost 8 cents per kilowatt-hour. Additionally, commercial and industrial prices in the area served by TVA are 14% and 16% below the national average, respectively.

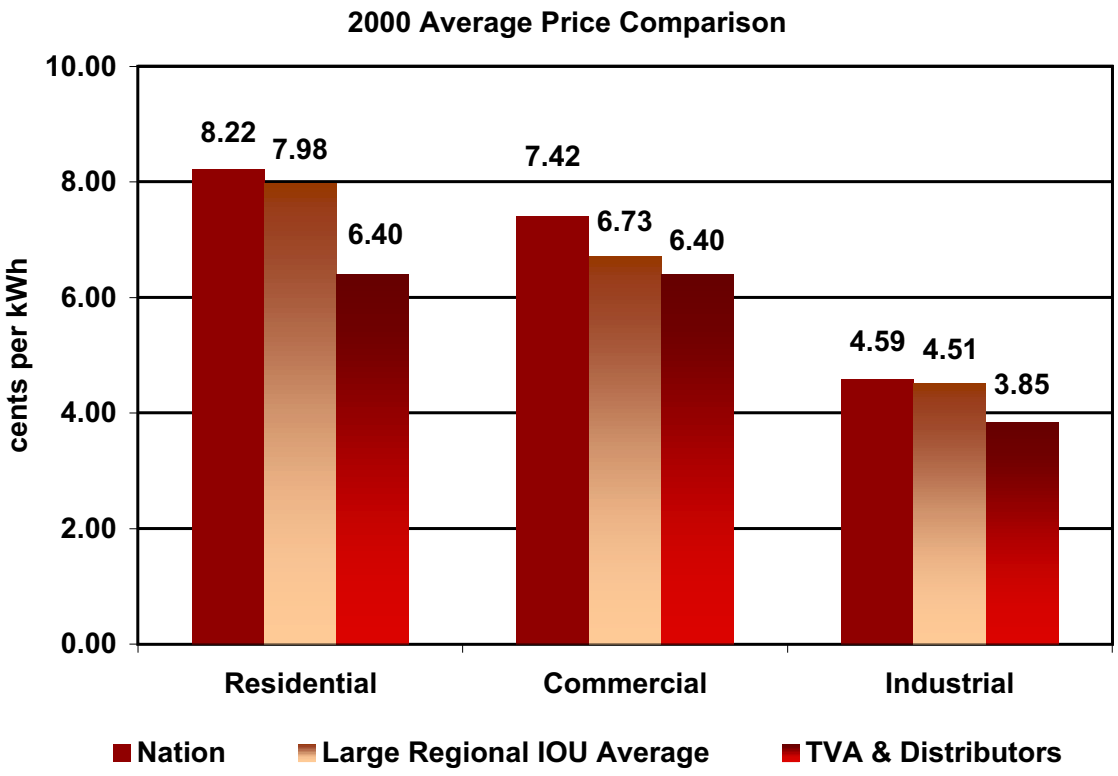
CY 2000 Price Comparison

Cents per kWh

Large Regional Investor-Owned Utilities	Residential	Commercial	Industrial
FirstEnergy	10.33	9.39	5.93
Exelon	10.05	8.16	5.67
DTE Energy	9.10	8.45	5.27
Progress Energy	8.29	6.32	4.77
Dominion	8.00	5.70	4.07
Entergy	7.89	6.89	4.95
FPL Group	7.56	6.21	4.79
Ameren	7.28	5.99	3.74
Duke	7.24	5.83	4.06
Southern Company	7.23	6.25	4.00
Cinergy	6.97	5.70	3.79
AEP	6.68	5.88	3.91
Large Regional IOU Average	7.98	6.73	4.51
National Average	8.22	7.42	4.59
TVA & Distributors	**6.40**	**6.40**	**3.85**

Source: RDI PowerDat - January 2002

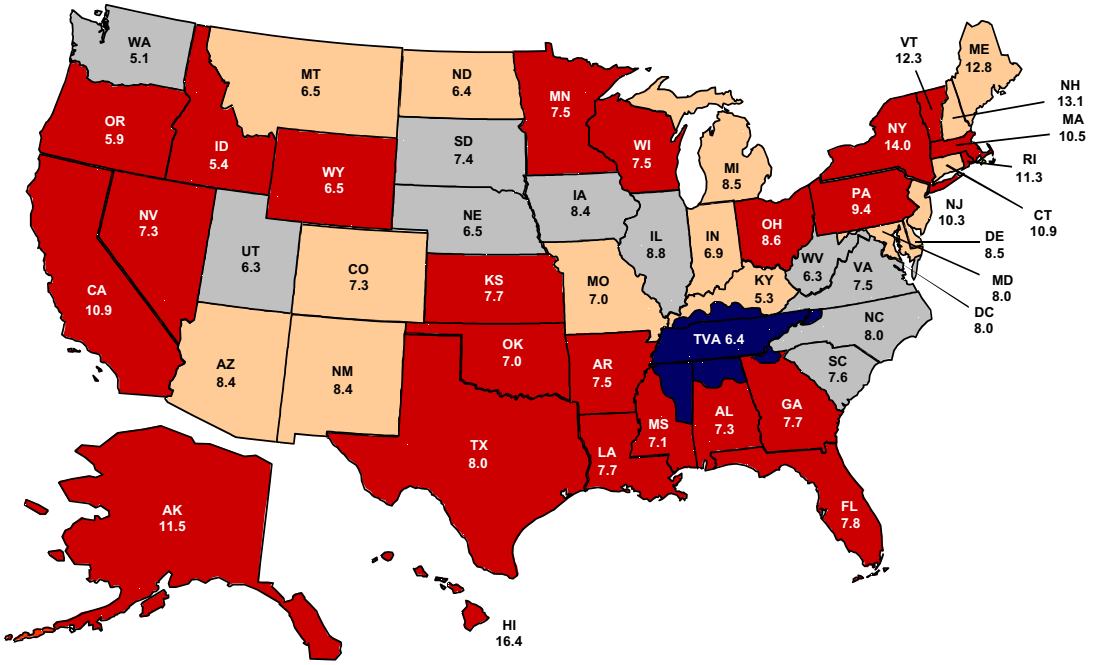
Competitive Position



Source: RDI PowerDat - January 2002

2000 Average Residential Electricity Price Comparison

Cents per kWh

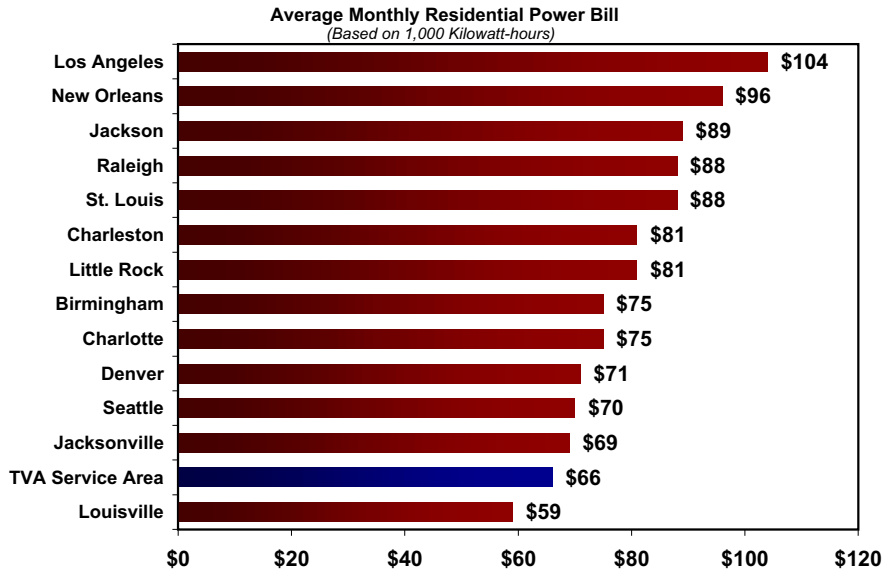


Price Increase in 2000
Price Decrease in 2000
No Change
TVA Service Area

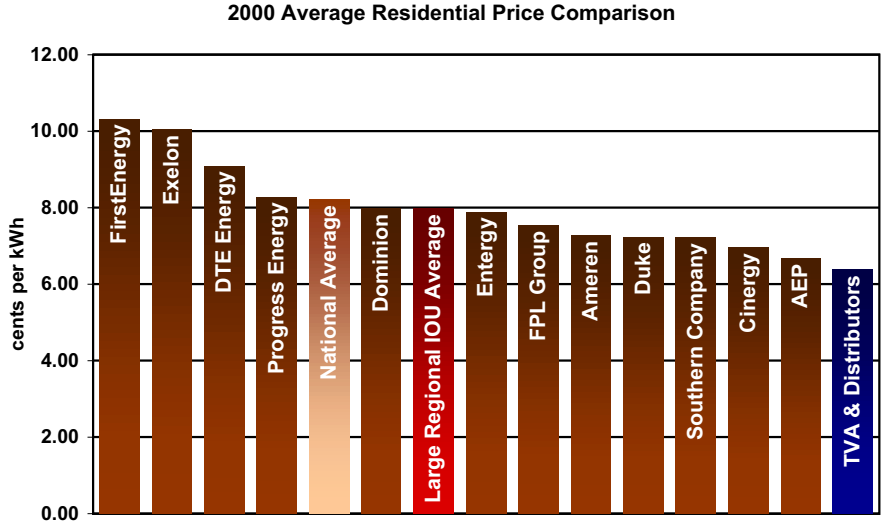
Note: Average price displayed in states partially in the TVA service area reflect average prices outside of the TVA service area.

Sources: Energy Information Administration (EIA); RDI PowerDat - January 2002

Competitive Position

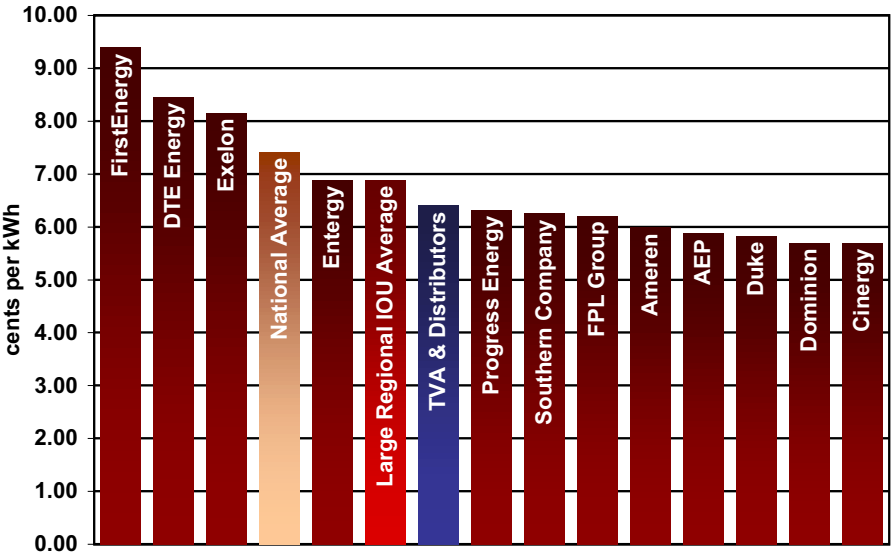


Source: TVA Survey of Selected Utilities, July 2001



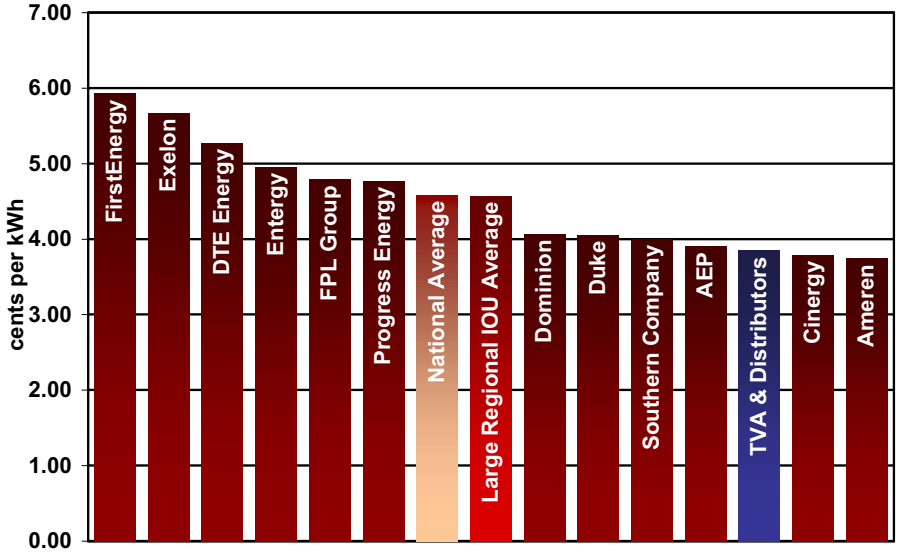
Source: RDI PowerDat - January 2002

2000 Average Commercial Price Comparison



Source: RDI PowerDat - January 2002

2000 Average Industrial Price Comparison



Source: RDI PowerDat - January 2002

Competitive Position

Wholesale Price Comparison

Power distributors want to offer retail rates that compare favorably to other distributors both regionally and nationally. Since the cost of purchased power makes up almost 80% of the retail price that distributors charge their customers, the rate that distributors pay for wholesale power is critical. TVA's ability to deliver wholesale power at competitive prices defines competitiveness for distributors of TVA power. The average price for TVA's wholesale power compares favorably to the weighted-average price of power sold in the Southeast, when all power sold in the region is considered.

A limited amount of full requirements wholesale power is sold in the region. Most power is currently being sold at the retail level, by vertically-integrated utilities that generate, transmit, and distribute power directly to retail end-users. The abundance of these vertically-integrated sales makes it difficult to directly observe the average wholesale price of a kilowatt-hour sold in the region.

The competitiveness of TVA's average wholesale power price can best be determined by computing an effective wholesale rate for the vertically-integrated companies that sell power in the regions surrounding TVA. The effective wholesale rate of these vertically-integrated utilities can be calculated by taking the price an end-use power customer pays and subtracting the distribution costs (including return on investment) that are embedded in this price.

When a comparison using this effective wholesale price is performed, the average wholesale price of TVA power is slightly lower than the average wholesale price for a kilowatt-hour sold in the region. This is true even though TVA's wholesale rates include the cost of providing certain services that may not be included in the wholesale rates of other utilities, including:

- Services for Individual Customers of Power Distributors
- Marketing Support for Power Distributors
- Community Development Services
- Energy Supply & Transmission & Distribution Support for Power Distributors
- Product Development Support for Power Distributors
- General Administrative Corporate Support for Power Distributors
- Environmental Support for Power Distributors

TVA provides these services to make distributors of TVA power more competitive, as most distribution companies would incur a higher cost in providing these services individually. These services slightly increase the cost of wholesale power, but ultimately, the price of retail power in the Tennessee Valley is lower because of the efficiency that is gained from TVA's centralization of these costs.

TVA's wholesale power rates are competitive even while TVA provides many services to distributors and maintains a very reliable power system. The reliability of a power provider is not captured in any rate comparison. Distributors of TVA power measure quality in terms of reliability and to them, quality is as important as price. TVA's ability to meet the needs of its customers by providing reliable, affordable power is ultimately what makes TVA competitive.

TVA Will Continue To Be Competitive in the Future

The current market for wholesale electricity is the result of an evolution over the past thirty years. In the future, TVA will likely face new and different competitors and the products demanded will be much more varied. It appears that the market will no longer be dominated by integrated utilities selling power at the cost of production. New entities will continue to emerge and the industry will probably become a market-based environment, where power is bought and sold at market-based rates and price is much more variable.

Competitive wholesale supply in the future will most likely be produced by newly constructed capacity, and the products from these sources will, given appropriate lead times and a balanced market, reflect the required rate of return on this capital investment. But while future power needs will not necessarily be met exclusively by new supply, the availability of this supply will be a large factor in determining the price of wholesale power. Increasingly, the prices that electricity consumers pay will reflect shortages or surpluses in this capacity as the market of tomorrow develops.

TVA will remain competitive in the future by continuing to provide reliable, affordable power while continuously monitoring and adjusting to the environment in which it operates. TVA will provide stability for its customers as uncertainty becomes the standard.